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Ramon A. Klitzke

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PATENT LAW: EQUIVALENCY AND VALIDITY IN THE SEVENTH CIRCUIT

RAMON A. KLITZKE*

This article reviews the most recent patent cases handed down by the United States Court of Appeals for the Seventh Circuit.¹ The rationales of these cases are explored, as well as the general posture taken by the court in patent-related issues. Prognostication is not a major purpose of this article because of the relatively few patent cases recently addressed by the court. Trends in the Seventh Circuit can be most accurately traced if previous reviews are read in conjunction with this one.²

The most important Seventh Circuit contribution of late was to the development of the doctrine of equivalents.³ Other recent cases pertained to patent validity, including issues of amendment after public use,⁴ validity determination in the face of fraud,⁵ appropriate jurisdiction over validity,⁶ obviousness,⁷ and the requirement of synergistic effect in combinations.⁸ These issues will be taken up seriatim, with a

* Associate Professor of Law, Marquette University Law School; Registered Patent Attorney; Member of Wisconsin, Texas and New York Bars; Reporter, Wisconsin State Bar Section of Administrative and Local Government Law; B.S., Illinois Institute of Technology; J.D., Indiana University; LL.M., New York University.

1. The earliest case to be treated is *St. Regis Paper Co. v. Bemis Co., Inc.*, 549 F.2d 833 (7th Cir. 1977), *rev'g* 403 F. Supp. 776 (S.D. Ill. 1975), *cert. denied*, 434 U.S. 833 (1977), and the latest case available as of the time the article was completed is *The Allen Group, Inc. v. Nu-Star, Inc.*, 575 F.2d 146 (7th Cir. 1978), decided April 28, 1978.

2. See *Schneider v. Patent Law*, 53 CHI.-KENT L. REV. 408 (1976) [hereinafter cited as *Schneider*], and *Sprowl, Patent Law*, 51 CHI.-KENT L. REV. 527 (1974) [hereinafter cited as *Sprowl*].

3. See *Panther Pumps & Equip. Co., Inc. v. Hydrocraft, Inc.*, 566 F.2d 8, (7th Cir. 1977), *cert. denied*, 98 S. Ct. 1887 (1978); *The Allen Group, Inc. v. Nu-Star, Inc.*, 575 F.2d 146 (7th Cir. 1978). These cases are discussed in the text accompanying notes 36-52 *infra*. *The Allen Group* really relates to patent validity and equivalency of elements in a combination, not the doctrine of equivalents, which is an infringement theory. The two doctrines are cousins, however.

4. See *Faulkner v. Baldwin Piano & Organ Co.*, 561 F.2d 677 (7th Cir. 1977), *cert. denied*, 98 S. Ct. 1450 (1978). This case is discussed in the text accompanying notes 90-98 *infra*.

5. See *Roberts v. Sears, Roebuck & Co.*, 573 F.2d 976 (7th Cir. 1978). This case is discussed in the text accompanying notes 67-79 *infra*.

6. See *Milprint, Inc. v. Curwood, Inc.*, 562 F.2d 418 (7th Cir. 1977). This case is discussed in the text accompanying notes 80-85 *infra*.

7. See *The Allen Group, Inc. v. Nu-Star, Inc.*, 575 F.2d 146 (7th Cir. 1978). This case is discussed in the text accompanying notes 50-52 *infra*.

8. See *St. Regis Paper Co. v. Bemis Co., Inc.*, 549 F.2d 833 (7th Cir. 1977), *rev'g* 403 F.

view toward gaining some insight into the current attitude of the Seventh Circuit towards patents.

Before embarking upon an analysis of Seventh Circuit patent law, a word about case load is in order. While once considered to be so "pro-patent" as to be a favorite hunting ground of plaintiffs in infringement actions,⁹ this circuit could now be enjoying a respite from these cases.¹⁰ If appellate cases are any measure of the quantity of lawsuits brought in the district courts, the patent bar may now no longer be as infatuated with the Seventh Circuit as was once true.¹¹ The abruptness with which the patent case load has diminished would indicate either that patentees are flocking elsewhere, or that patentees everywhere have let up on enforcement. Furthermore, the recent decision recognizing pre-emption of jurisdiction by a state court over patent validity¹² may lead to a further reduction of the number of patent cases in this circuit if the patent bar views this decision as a bellwether.

EQUIVALENCY

The Doctrine of Equivalents

The United States Supreme Court fashioned the doctrine of equivalents as a foil against unscrupulous infringers who hoped to evade a patent by substituting a different but functionally equivalent element for one specifically claimed in combination claims.¹³ The avowed purpose of the doctrine was to protect the patentee against unduly restrictive claim interpretation. The infringer was not to be allowed "to make unimportant and insubstantial changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law."¹⁴ The doctrine of equivalents is really only one of many principles underlying the general rule that patent claim terms should be construed as covering all reasonable subterms known to one

Supp. 776 (S.D. Ill. 1975), *cert. denied*, 434 U.S. 833 (1977). This case is discussed in the text accompanying notes 63-66 *infra*.

9. Sprowl, *supra* note 2, at 527.

10. Twenty patent-related decisions were published during the Seventh Circuit's 1972-73 term and at least seventeen during the 1974-75 term. Only six decisions were published during the period covered by the present article.

11. In 1974, Sprowl suggested that the Seventh Circuit might have handled more patent law suits than any other circuit at that time. See Sprowl, *supra* note 2, at 527.

12. *Milprint, Inc. v. Curwood, Inc.*, 562 F.2d 418 (7th Cir. 1977). See text accompanying notes 80-85 *infra*.

13. One of the earliest cases to announce the doctrine was *Winans v. Denmead*, 56 U.S. (15 How.) 330 (1853).

14. *Graver Tank & Mfg. Co. v. Linde Air Prod. Co.*, 339 U.S. 605, 607 (1949). See also 39 CAL. L. REV. 302 (1951), 99 U. PA. L. REV. 428 (1950).

skilled in the art.¹⁵ The careful patent solicitor will include language referring to other possible means or steps for accomplishing what is disclosed in the specification.¹⁶

The doctrine must not be unduly extended. The patent grant is itself an exception to the time-honored rule which abhors the creation of monopolies¹⁷ and any judicial expansion of the patent grant should be thoroughly justified and carefully circumscribed. It has long been recognized that an invention does not infringe unless it is identical with that protected by the patent.¹⁸ However, what is meant by identity is substantial identity of effects, functions and modes of operation, not exact physical or chemical coincidence.¹⁹ A presiding judge faces a dilemma when the outer boundaries of the coverage of the patent claims must be drawn: the doctrine of equivalents extends these boundaries, while the doctrine of monopoly limitation retracts them.

The doctrine of equivalents supersedes the file wrapper estoppel doctrine. In file wrapper estoppel the patent applicant has narrowed the scope of a claim to avoid certain prior art cited by the examiner. The examiner usually has pointed out that one of the applicant's steps or elements is equivalent to that in the prior art and the amendment is made to exclude that step or element and obtain patenting of a more limited claim. When the issued patent is the basis of a subsequent infringement suit, the patentee is now estopped to assert that his claim covers the equivalent of that broader claim which he had surrendered.²⁰ Conversely, merely because a patentee had been required to restrict his claims to a narrower invention, he is not thereby foreclosed from invoking the doctrine of equivalents in all instances. What is precluded is only that which was excluded during the prosecution of the application.²¹ Where the alleged infringer's element is not within that excluded by the patentee during the prosecution, the doctrine of equivalents is available to include the infringer's device within the claims.²²

15. *See* *Decca, Ltd. v. United States*, 544 F.2d 1070, 1080 (Ct. Cl. 1976).

16. *Id.*

17. *Darcy v. Allen*, 72 Eng. Rep. 830 (K.B. 1602), was the case which precipitated the Statute of Monopolies, 21 Jac. I, c.3 (1623). This statute only limited monopoly grants to inventions. *See* Klitzke, *Historical Background of the English Patent Law*, 41 J. PAT. OFF. SOC'Y 615 (1959).

18. *See* 3 Robinson, *THE LAW OF PATENTS* 44 (1890).

19. *Id.* at 48.

20. *Capri Jewelry, Inc. v. Hattie Carnegie Jewelry Enter., Ltd.*, 539 F.2d 846, 852 (2nd Cir. 1976).

21. *Ziegler v. Phillips Petroleum Co.*, 483 F.2d 858, 870 (5th Cir. 1973), *cert. denied*, 414 U.S. 1079 (1974).

22. *Burger Train Systems, Inc. v. Ballard*, 552 F.2d 1377, 1384 (10th Cir.), *cert. denied*, 434 U.S. 860 (1977).

The modern doctrine of equivalents dates from the landmark case of *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*²³ Plaintiff Linde's electric welding flux patent included combination claims having alkaline earth metal silicates as a claim element. Linde's composition, "Unionmelt," as manufactured, actually contained silicates of calcium and magnesium, two alkaline earth metal silicates. The defendants substituted silicates of calcium and manganese, the latter not an alkaline earth metal, and thus were literally outside of the scope of the claims.²⁴ Although the Court had previously found that claims referring to "silicates" and "metallic silicates" were too broad to be valid,²⁵ it nevertheless held that the remaining valid claims were infringed by a composition containing over eighty-eight percent by weight of manganese silicate because the infringing fluxes were "identical in operation and produce the same kind and quality of weld."²⁶

The underlying rationale of the Court is instructive. The doctrine of equivalents initially had been applied in the interpretation of mechanical patents, but the Court observed that the same principles subsequently were applied to chemical patents.²⁷ In both instances the purpose of the doctrine was to thwart fraud.²⁸ To allow an infringer to avoid a patent claim merely by replacing one element of a combination with another having the same effect and function, although literally outside of the claim language, "would be to convert the protection of the patent grant into a hollow and useless thing."²⁹ Parenthetically, the Court noted that the doctrine may sometimes be used against the patentee. If the allegedly infringing device is so far changed in principle from the patented article that it performs the same or a similar function in a substantially different way, the doctrine may be used to restrict the claim to the patentee's invention only, even though the allegedly infringing device reads on the literal words of the claim.³⁰

23. 339 U.S. 605 (1949). *Graver Tank* is a decision on rehearing, confined to the issue of the doctrine of equivalents. It was the first case since 1872 in which the Court applied the doctrine in a chemical composition case. See 99 U. PA. L. REV. 428, 430 (1950).

24. 339 U.S. at 610.

25. *Graver Tank & Mfg. Co. v. Linde Air Prod. Co.*, 336 U.S. 271, 276 (1949). This is the first of two *Graver Tank* decisions. In this first decision some claims were upheld. It is one of only five cases between 1930 and 1949 in which the Court upheld validity. In 28 cases the patents were held to be invalid. See 49 COLUM. L. REV. 685 (1949).

26. 339 U.S. 605, 610 (1949).

27. *Id.* at 609.

28. *Id.* at 608.

29. *Id.* at 607.

30. *Id.* at 608-09.

The determination of equivalency is a question of fact.³¹ The test for equivalency is whether the infringing device "performs substantially the same function in substantially the same way to obtain the same result."³² Even if an ingredient was not disclosed in the patent, if one skilled in the art would have known of the interchangeability, equivalency is established.³³ Where a patented invention constitutes a major advance in the art, the patentee should be offered a wide range of equivalents.³⁴ When the invention is merely a slight improvement, only a narrow range can be given.³⁵

The doctrine of equivalents is a superfluous gloss on the patent law. The breadth of the generic terms allowed in the claims is the measure of the degree of advancement in the art. Reviewing courts must be cognizant of two facts: (1) the patentee will always generously expand the scope of the discovery in the specification, and (2) regardless of this, the test of patent scope ultimately must be the terms allowed by the Patent Office in the issued claims. To excessively extend the scope of the claims by the doctrine of equivalents may neutralize many months of negotiation in the patent prosecution process.

Panther Pumps & Equipment Co. v. Hydrocraft, Inc.

The United States Court of Appeals for the Seventh Circuit recently made a substantial contribution to the doctrine of equivalents in *Panther Pumps & Equipment Co. v. Hydrocraft, Inc.*³⁶ Chief Judge Markey's³⁷ esoteric analysis of the scientific principles involved must be carefully analyzed to appreciate the extent of the excursion into the doctrine of equivalents and the utility of the opinion as a precedent.

The *Panther Pumps* case had been up to the Seventh Circuit before.³⁸ This phase of the case arose under a civil contempt proceeding following a judgment of patent infringement and permanent in-

31. *Id.* at 609.

32. *Id.* at 608 (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)). The Court continues, quoting from *Machine Co. v. Murphy*, 97 U.S. 120, 125 (1904): "[I]f two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form or shape." *Id.*

33. *Lockheed Aircraft Corp. v. United States*, 553 F.2d 69, 83 (Ct. Cl. 1977); *Adams v. United States*, 330 F.2d 622, 626 (Ct. Cl. 1964), *aff'd*, 383 U.S. 39 (1966).

34. *Treibacher-Chemische Werke Gesellschaft Mit Beschränkter Haftung v. Roessler & Haslach Chem. Co.*, 219 F. 210, 212 (2nd Cir. 1914).

35. *Aluminum Co. of Am. v. Thompson Prod.*, 122 F.2d 796 (6th Cir. 1941).

36. 566 F.2d 8 (7th Cir. 1977).

37. Chief Judge Howard Thomas Markey, United States Court of Customs and Patent Appeals, was sitting by designation. 566 F.2d at 10.

38. 468 F.2d 225 (7th Cir. 1972), *cert. denied*, 411 U.S. 965 (1973). See also *Schneider*, *supra* note 2, at 413.

junction.³⁹ Undoubtedly of no small influence was the fact that following the district court infringement judgment, the defendant Beck attempted to avoid execution by transferring the defendant Hydrocraft's assets to another corporation. He also employed an engineer to fraudulently circumvent the injunction against further infringement. Ancillary issues relating to substitution of parties, piercing the corporate veil, pendency of the former case and fraud in escaping liability under a judgment do not detract from the force of the main issue, *i.e.*, the doctrine of equivalents, but they must be taken into consideration in assessing the value of the case as a precedent.

The district court did not find Beck in violation of the injunction. The injunction had included in the term "infringing product" not only any product covered by the valid claims of the patents, but also "any colorable imitation or equivalent thereof, including, but not limited to, the product identified in the captioned case as Defendants' 'Spray Mate Pump.'"⁴⁰ The Spray Mate Pump was the basis of the original infringement action. The district court found that the object of the contempt proceeding, the Spraymate B Pump, was not the equivalent of the Spray Mate Pump because it did not perform its functions in substantially the same fashion.⁴¹

The patented invention was an improvement in paint spray pump apparatus. In the prior art, a flexible diaphragm in the pump was reciprocated by "driving fluid" being alternately forced toward and from the diaphragm by the action of a piston. Paint was pumped to a spray nozzle by the reciprocating action of the diaphragm, but when the nozzle was temporarily turned off, either paint or driving fluid had to be recirculated within the pump body if the pump motor stayed on "stand by." In either case, the fluid heated because of the recirculation and had to be cooled.⁴²

The patentee discovered that auxiliary cooling equipment could be eliminated by returning less driving fluid on the piston backstroke than had been expelled on the forwardstroke. Because, on the piston backstroke, the driving-fluid chamber expanded to a volume greater than that of the driving fluid itself (in this case, ethylene glycol, which is virtually incompressible), cavities were formed in the driving fluid and some of it vaporized. This "cavitation," allowed the pump to consume less horsepower on the forwardstroke and auxiliary cooling became un-

39. In the earlier decision the court of appeals affirmed the judgment of validity, infringement and damages of \$150,000. 468 F.2d 225 (7th Cir. 1972).

40. 424 F. Supp. 815 (N.D. Ill. 1976).

41. *Id.* at 819.

42. 566 F.2d at 12.

necessary.⁴³

Defendant's original Spray Mate Pump had been found to infringe the patent because both devices exhibited cavitation cooling; in fact, this was the essence of the plaintiff's apparatus patent. During the contempt proceeding the defendant produced two expert witnesses who testified that Spraymate B did not produce phase reversal cavitation because of the interposition of a multipart drive shaft connecting the piston to the motor. The defendant argued that, if cavitation had been the chief characterizing step originally determining patentability, and if this was also the specific element of the invention under which the first Spray Mate Pump was found infringing, then Spraymate B, which had no cavitation, could not violate the injunction. Although the plaintiff's expert witnesses testified that cavitation did occur in Spraymate B, the district court chose to believe the defendant's experts.⁴⁴

While admitting that a finding of equivalency is a determination of fact,⁴⁵ Judge Markey swept aside the district court's findings because they did not address the issue of equivalency. Noting that *Graver Tank* does not require complete identity in order to show equivalency, Judge Markey held that the evidence did not show that the Spray Mate and Spraymate B pumps operate in a significantly different way. The most important factor to Judge Markey was that the defendant merely substituted a multipart, spring-loaded shaft to drive the pump piston. The defendant's experts had vigorously testified that this was the very element which eliminated cavitation and which thus avoided the plaintiff's claims,⁴⁶ but their argument was unpersuasive.

Some practicing patent attorneys may hail this case as a major strengthening of the doctrine of equivalents. Not only does the doctrine apply to the originally infringing device, but now it also reaches any device equivalent to the infringing device, regardless of whether the second device actually reads on the claims. Admittedly, such second stage coverage may be justified when it is the same previously adjudicated infringer who deliberately seeks to avoid an injunction. Furthermore, when the injunction covers "any colorable imitation or equivalent"⁴⁷ of the infringing device, and any product covered by the claims adjudicated valid, as it did in *Panther Pumps*,⁴⁸ the defendant is in a weak position to argue minor differences in the newly designed

43. *Id.* at 13.

44. *Id.* at 15.

45. *Id.* at 19.

46. *Id.* at 19-20.

47. 424 F. Supp. at 818.

48. 566 F.2d at 11.

device. That the claims must read on the new device for the defendant to be in contempt is basic. An injunction should apply only to "infringing" devices, *i.e.*, those whose elements are to be found in the valid claims.

A major problem for the patent bar is the degree to which the trial court has the jurisdiction to enjoin the making, using or selling of devices similar, but not identical, to those disclosed by the patentee or found to be infringing in an earlier case. The *Panther Pumps* extension of protection eliminates the need for additional adjudication when an infringer makes a minor change in the infringing device merely to circumvent an injunction. But frequently the defendant may be extensively practicing in the same art as the patentee and, if his experts are able to invent around the claims of the patent and make a new contribution to the art, they should be allowed to do so. The injunction must protect only the reasonable scope of the patentee's claims. When, by a double application of the doctrine of equivalents, the injunction reaches an invention that is equivalent to an invention adjudicated as equivalent to the patent, then the patentee has secured very broad protection indeed. If equivalency as applied means "'substantially the same function in substantially the same way,'"⁴⁹ then a substantial area of possible research and development has been effectively foreclosed to the adjudicated infringer and other potential inventors.

The Allen Group, Inc. v. Nu-Star, Inc.

Equivalency as a major principle in the patent law is a two-edged sword. While the doctrine of equivalents serves to define the scope of the patent claim, the doctrine also can either thwart the inventor's application for a patent or invalidate an issued patent for obviousness under section 103 of the Patent Act.⁵⁰ If one having ordinary skill in the art of the invention would find it obvious to make the changes or substitution made by the inventor, the statute forbids acquisition of the patent. The United States Supreme Court has applied section 103⁵¹ strictly against most inventions and it is the strong invention, indeed, which passes judicial muster these days.

49. *Graver Tank & Mfg. Co. v. Linde Air Prod. Co.*, 339 U.S. 605, 608 (1949) (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)).

50. 35 U.S.C. § 103 (1976). See note 53 *infra*.

51. *Graham v. John Deere Co.*, 383 U.S. 1 (1966). In the last two section 103 cases to reach the Supreme Court, both inventions were held unpatentable under the statute. *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976); *Dann v. Johnston*, 425 U.S. 219 (1976). In the last patentability case handed down by the Court, the invention was held to be unpatentable under 35 U.S.C. § 101 (1976). *Parker v. Flook*, 98 S. Ct. 2522 (1978).

In a short, per curiam opinion, the Seventh Circuit court affirmed a decision of invalidity for obviousness in *The Allen Group, Inc. v. Nu-Star, Inc.*⁵² An element of the patented roll-over vehicle washing apparatus was found to be equivalent to an element disclosed in a prior patent and patentability was lacking. One of ordinary skill in the art of vehicle washing apparatuses obviously would have known to combine two prior patents cited by the defendant to produce the invention at issue; thus, the court found invalidity, almost without comment.

The *Allen Group* case exemplifies a continuing problem for patent attorneys. Neither of the prior patents used to invalidate the patent in *Allen Group* was cited by the Patent Office examiner during the patent prosecution. The issuance of a patent clearly does not insure absolute prospects of success against infringers unless all relevant art is consulted during the prosecution. Even then the patentee frequently faces an unsympathetic judge.

PATENT VALIDITY

In the only two recent Seventh Circuit cases to address the question of obviousness under section 103 of the Patent Act,⁵³ the court did not find validity.⁵⁴ Other patent validity cases handed down by the court during the 1977-78 term include the rarely raised issues of late-claiming,⁵⁵ fraud⁵⁶ and choice of forum.⁵⁷

The Requirement of Synergism

The practicing inventor never starts completely from scratch. Any solution to a problem must inevitably build upon that which has gone before. It is that special insight of the inventor which discovers a solution theretofore evading previous attempts. In an invention comprising a combination (and almost all inventions are combinations), whether it be mechanical, chemical or electrical, the several elements of the combination usually are known, sometimes for many years. The

52. 575 F.2d 146 (7th Cir. 1978).

53. 35 U.S.C. § 103 (1976) provides, in pertinent part:

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

54. *St. Regis Paper Co. v. Bemis Co., Inc.*, 549 F.2d 833 (7th Cir. 1977), *rev'g* 403 F. Supp. 776 (S.D. Ill. 1975), *cert. denied*, 434 U.S. 833 (1977). *The Allen Group, Inc. v. Nu-Star, Inc.*, 575 F.2d 146 (7th Cir. 1978).

55. *See Faulkner v. Baldwin Piano & Organ Co.*, 561 F.2d 677 (7th Cir. 1977), *cert. denied*, 98 S. Ct. 1450 (1978).

56. *See Roberts v. Sears, Roebuck & Co.*, 573 F.2d 976 (7th Cir. 1978).

57. *See Milprint, Inc. v. Curwood, Inc.*, 562 F.2d 418 (7th Cir. 1977).

inventor unites the particular elements in a unique and novel manner and this results in the patentable combination. To distinguish the patentable combining of elements from the nonpatentable inventions to be expected from one having ordinary skill in the art, the United States Supreme Court announced the doctrine of synergistic effect.

One of the last patent cases decided by the Court, *Sakraida v. Ag Pro, Inc.*,⁵⁸ discussed and relied upon the requirement of synergism. As could have been predicted, the Court found that the invention was obvious under the obviousness test of section 103. The patentee had combined thirteen elements to produce a novel combination for washing dairy barn floors. Because each of the elements had been previously known, the Court sought a "synergistic" effect, *i.e.*, "an effect greater than the sum of the several effects taken separately."⁵⁹ Because the novel result of the invention, in the eyes of the Court, was simply the abrupt release of a flow of water to wash away animal wastes, the Court could find no synergistic effect, and accordingly agreed with the district court's assessment of invalidity.⁶⁰ It would seem that the Court could have found a more appropriate case for certiorari than a relatively simple manure flush system. It is truly difficult to fathom the rationale behind the choice of patent cases the Supreme Court has made in recent years.

The leading Supreme Court case requiring synergistic effect is *Anderson's-Black Rock, Inc. v. Pavement Salvage Co., Inc.*⁶¹ The patentee had combined a radiant-heat burner with an asphalt paving machine to solve the problem created by "cold joints" when new asphalt must be laid adjacent to, and joined with, existing asphalt. In that case the Court found that the invention, "though perhaps a matter of great convenience, did not produce a 'new or different function' A combination of elements may result in an effect greater than the sum of the several effects taken separately. No such synergistic result is argued here."⁶²

The United States Court of Appeals for the Seventh Circuit sought vainly for synergism in *St. Regis Paper Co. v. Bemis Co., Inc.*,⁶³ and reversed a district court judgment of patent validity in an infringement

58. 425 U.S. 273 (1976).

59. *Id.* at 282 (quoting *Anderson's-Black Rock Inc. v. Pavement Salvage Co., Inc.*, 396 U.S. 57, 61 (1969)).

60. 425 U.S. at 281-82.

61. 396 U.S. 57, 61 (1969). This case was followed in *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976).

62. 396 U.S. at 60-61.

63. 549 F.2d 833 (7th Cir. 1977), *rev'g* 403 F. Supp. 776 (S.D. Ill. 1975), *cert. denied*, 434 U.S. 833 (1977). This was an action for infringement of a principal patent and two reissues.

suit. The patent covered a specialized bag so designed as to facilitate the sealing of three separate surfaces when the bag was closed, thus insuring leak-proof seals. The court found that the article consisted of four elements: (1) gussets (the folded sides of the bag), (2) a pinch bottom, (3) a stepped feature, and (4) multiple layers. The defendant cited a patent which disclosed the first three elements, and further demonstrated that multiple layers were known in the bag industry for many years. The court then determined that, because the addition of multiple layering to the cited prior patent created no synergistic combination, it would have been obvious to one skilled in the art.⁶⁴ The court found it unnecessary to cite its recent opinion announcing the correct legal test to be followed in determining obviousness,⁶⁵ citing the subsequent Supreme Court decision in *Sakraida v. Ag Pro, Inc.*⁶⁶

The court's approach to the question of validity demonstrates the typical skepticism with which the courts view patents. The case also demonstrates a common tactic employed by defense attorneys in infringement cases that is frequently successful. The tactic is merely to simplify the patented invention so completely that the judge feels he fully understands it and that, therefore, it surely would have been obvious to one skilled in the art, had that person known all of the references now before the court. *St. Regis Paper* is a good example of this phenomenon. The court viewed the invention as an elementary addition of multiple layering to an existing patent. The district court had seen that the uniquely stepped layers were the key to the successful sealing of the bag when they were folded over. For the district court, the novel arrangement of the layers produced a synergistic effect. For the court of appeals, it did not and, because the question of patent validity in this case was ultimately one of law, the court clearly was within its province in reversing the district court.

Roberts v. Sears, Roebuck & Co.

In a major victory for the independent outside inventor, *Roberts v.*

64. The court stated, "It is difficult to conceive of a more obvious method of strengthening a certain type of bag than putting one bag inside of another." 549 F.2d at 839.

65. *E-T Indus., Inc. v. Whittaker Corp.*, 523 F.2d 636 (7th Cir. 1975), cert. denied, 429 U.S. 870 (1976). After the trial court has made its findings of fact, the correct legal test to be used involves three considerations: "first, whether each element of the invention is obvious; second, if so, whether the combination is obvious; and third, if the combination seems obvious in itself, whether the rejection of the contrary teaching in the prior art requires a different conclusion." 523 F.2d at 641. For a discussion of this case see Schneider, *supra* note 2, at 410.

66. 425 U.S. 273 (1976). *Sakraida* offered few guidelines for determining obviousness. See Schneider, *supra* note 2, at 412.

*Sears, Roebuck & Co.*⁶⁷ repeats a warning frequently found in patent cases. If the inventor can achieve a confidential relationship with a corporation, the corporation is at a serious disadvantage when it accepts the invention by license or assignment. If any semblance of confidential relationship can be conjured up by the court, the corporation will find itself in deep trouble.

Although the corporate defendant in *Roberts* vigorously protested the characterization of its relationship with plaintiff Roberts as confidential, both the trial jury and the appellate court found such a relationship, and from there on defendant Sears' prospects were bleak. The relationship arose when Roberts, one of the defendant's sales clerks, invented a quick-release socket wrench which allowed the user to change sockets with one hand. A number of facts were withheld by Sears from Roberts during the negotiations, not the least of which was knowledge that a patent had already been granted for the invention. Roberts did not learn this until after he had assigned the invention for a maximum of \$10,000. Furthermore, Sears knew that the invention would be extremely successful commercially, but Roberts did not.⁶⁸

Within ten years, Sears sold over nineteen million of the quick-release wrenches, many at a profit of one to two dollars each. Roberts sued for either a return of the patent and restitution, or damages for fraud, breach of a confidential relationship and negligent misrepresentation. The district court entered judgment for one million dollars, but denied Roberts' request for rescission and restitution. Both sides appealed to the Seventh Circuit Court of Appeals.⁶⁹

Sears' main argument on appeal was that the validity of Roberts' patent should have been determined before the issues of fraud, breach of confidential relationship and misrepresentation were tried. If the patent was invalid, argued Sears, the invention would be worthless and Roberts then could not have been injured. Sears cited *Lear, Inc. v. Adkins*⁷⁰ as its authority for challenging the patent and in support of its argument that no royalties would be due for an invalid patent.⁷¹

67. 573 F.2d 976 (7th Cir. 1978).

68. *Id.* at 979.

69. *Id.* at 980.

70. 395 U.S. 653 (1969). In *Lear*, the patentee-inventor sued to enforce royalty obligations from the licensee-manufacturer based upon a contract. The licensee defended on the grounds that the patent at issue had been anticipated by prior art and was invalid. The Court held that federal policies would be frustrated if the licensee were required to pay royalties while challenging patent validity and that if the patent were found to be invalid, no royalties would be due despite the contract obligations.

71. 573 F.2d at 980.

The court disposed of this argument by pointing out that the *Lear* Court explicitly recognized significant economic value in an unchallenged patent, and that the Supreme Court also had applied this principle in a trade secrets case.⁷² Furthermore, *Lear* involved a license, whereas the plaintiff Roberts had assigned the invention to Sears. Moreover, Sears must have believed that the patent had value: it had the patent number stamped on all of the wrenches, thus preventing competitors from entering this lucrative market for several years.⁷³

Additionally, the court refused to extend *Lear* to this case because the *Lear* opinion did not apply the patent law until after it was clear that both parties had acted in good faith and that the equities were balanced on each side.⁷⁴ In this case the equities between Sears and Roberts were unbalanced because of Sears' conduct—which amounted to fraud.⁷⁵

Sears then argued that a confidential relationship could not have arisen because (1) such a relationship cannot be thrust upon a nonconsenting party, and the plaintiff never proved that Sears had knowledge of any confidential relationship, and (2) since the plaintiff retained counsel to guide him, he could not have relied upon Sears' representations. The court found neither of these arguments persuasive. Instead, it stated that a confidential relationship need not be proved by direct evidence, that only the circumstances creating the relationship need be proved,⁷⁶ and that the existence of counsel is only one factor to be considered. The court reasoned that since the jury was properly instructed on this issue, it obviously had rejected Sears' argument.

In affirming the district court on the foregoing issues, the court of appeals could have concluded its opinion at that point, and the case would have vindicated an independent inventor pitted against a giant corporation. However, the court was not content to leave the case in that posture, and went even further. It turned to the question of the plaintiff's action for rescission of the contract and restitution of the patent, and reversed the district court's denial of those remedies. In a surprising finale to its opinion, the court held that Roberts need not have elected his remedies, since federal law controlled and the court, thus, was not bound by the Illinois election of remedies doctrine.⁷⁷ The court decided that state procedural law was inapplicable because,

72. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 482 (1974).

73. 573 F.2d at 981.

74. 395 U.S. at 670.

75. 573 F.2d at 982.

76. *Id.* at 983.

77. *Id.* at 984-85.

while Illinois retains separate courts of equity and law,⁷⁸ the federal courts abolished the distinction between equity and law long ago. Thus, it would be anomalous for the federal courts to follow a state rule so at odds with the federal system.⁷⁹ The district court did have the power to award rescission, and the case was remanded for a determination of whether that remedy was appropriate. The court further held that an award of one million dollars in damages is not inconsistent with a demand for a return of the patent. After all, the damages were a measure of past profits and surely the plaintiff should not be denied future benefits.

The *Roberts* case may not be popular with corporate counsel, to say the least. One wonders if the court extended the protection afforded by the confidential relationship to an unwarranted remedy. Even if a confidential relationship is assumed—and the facts do not clearly support that conclusion—should Sears have been required to disclose all of the marketing and technical information it had developed? With respect to the agreed-upon consideration in the contract negotiations the parties were dealing at arm's length. Surely an inventor having the technological skill to develop a patentable quick-release socket wrench would realize its market potential if he knew that there had been no comparable tool on the market. Even if he had no market expertise, should his failure to seek proper advice penalize the other contracting party?

The court emphasized the fact that Sears knew that a patent had been granted and the plaintiff did not know this at the time that the assignment was executed. Patents are not granted overnight, however, and it is likely that Roberts knew, from the communications he received from his patent attorney, that a patent would be granted. He should have been consulted about amendments and responses to the actions taken by the Patent Office and it is probable that he conferred with his attorney as to how the claims should have been revised. The court may have been swayed by the possible naivete of the plaintiff—he was only about nineteen when he submitted the invention to Sears—but it certainly must have been swayed by the inequality of bargaining power between the two parties. In any event, the *Roberts* case did not apply strict rules of contract interpretation in the face of substantial imbalance of power between independent inventor and giant corporation.

78. See, e.g., *Carr v. Arnold*, 239 Ill. 37, 87 N.E. 870 (1909).

79. 573 F.2d at 985.

Appropriate Forum for Determination of Validity

While the Seventh Circuit court applied the federal rule on election of remedies in the *Roberts* case, it was content to allow a state court to determine patent validity in *Milprint, Inc. v. Curwood, Inc.*⁸⁰ Holding that there is no exclusive federal jurisdiction over patent law questions, the court affirmed the district court's remand of the case back to the Milwaukee County Circuit Court.

Curwood originally brought the suit in the state court for royalty payments due under a license agreement with Milprint. A few weeks later, Milprint instituted a declaratory judgment action in the federal court, pointing out that in the license it had reserved the right to contest the patent validity and that the proper forum to contest validity was the federal court. Milprint argued that the federal statute⁸¹ gave the federal courts original and exclusive jurisdiction over patent cases and that the federal court's dismissal of Milprint's action was, thus, improper.

The court pointed out that, had Curwood chosen to declare the license forfeited by Milprint's failure to pay the royalties due, an infringement action would have been Curwood's recourse and the proper forum would have been the federal district court. However, this was exclusively a contract action and, there being no diversity of citizenship between the parties, the suit is properly laid in the state court.⁸² Milprint cannot, by attempting to invoke federal jurisdiction, establish by a declaratory action what would be merely a defense in the state court action. Neither party, in either action, ever stated that the license had been terminated, and, because the federal Declaratory Judgment Act⁸³ is procedural only, no federal question has arisen. To have a patent invalidity defense in a state court action is not necessarily to have a claim arising under the patent laws within the meaning of the federal statute.

Milprint argued that the state judicial system, because of its general unfamiliarity with patent law and potential discovery limitations in the state forum, is not equipped to resolve complex federal patent issues. The court responded by noting that jurisdiction simply cannot be conferred on the federal court on this basis, where it does not otherwise exist.⁸⁴

80. 562 F.2d 418 (7th Cir. 1977).

81. 28 U.S.C. § 1338(a) (1976).

82. 562 F.2d at 420.

83. 28 U.S.C. § 2201 (1976).

84. 562 F.2d at 421.

The result is, of course, that the Milwaukee County Court will be required to try Milprint's contest of patent validity. One wonders if a state court judge will be found who is sufficiently familiar with this type of highly technical trial to be comfortable in the situation. On the other hand, the state courts have no dearth of product liability cases and these are similar to patent cases in many respects. Regardless of the judge, state or federal, the litigants in a patent action must marshal sufficient expert testimony not only to prove the facts of infringement, but also to provide the judge with a short course in engineering or some other science.⁸⁵ Perhaps many state judges would welcome this refreshing change of pace.

Claim Amendment After Public Use of the Invention

In the leading case of *Muncie Gear Works, Inc. v. Outboard, Marine & Mfg. Co.*,⁸⁶ the United States Supreme Court held that, where a patent application amendment introduces new matter into the claims, those claims are invalid if the new matter has been in public use or on sale more than two years before such introduction.⁸⁷ In that case the patent applicant had introduced the concept of "smooth and unbroken walls" in his claims covering an outboard motor invention by means of an amendment submitted some three years after motors had been marketed with the improvement. The concept had not originally appeared in the application either in the specification or the claims.⁸⁸ The Court equated the statutory term, "application," with an amendment introducing new matter, observing that to sustain the amended claims in question "would require a plain disregard of the public interest sought to be safeguarded by the patent statutes."⁸⁹

The United States Court of Appeals for the Seventh Circuit applied the *Muncie Gear* case in *Faulkner v. Baldwin Piano & Organ Co.*,⁹⁰ a patent infringement action involving an electronic organ pat-

85. A judge of the United States District Court for the Northern District of Illinois has described this as a "critical judicial dysfunction in the patent area." Marovitz, *Patent Cases in the District Courts—Who Should Hear Them?* 58 J. PAT. OFF. SOC'Y 760, 760 (1976).

86. 315 U.S. 759 (1942).

87. This period of limitation is now only one year. The statute provides, in relevant part: A person shall be entitled to a patent unless—

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country more than one year prior to the date of the application for patent in the United States

35 U.S.C. § 102(b) (1970).

88. The applicant also amended the specification to include this additional concept, of course.

89. 315 U.S. at 768.

90. 561 F.2d 677 (7th Cir. 1977).

ent which used direct, instead of alternating, current for keying. An important element of the amended claims was a "non-linear conducting device," which connected a tone generator and a translating device. This element of the claim had previously read, "neon glow tube attenuator," which was a species of the generic "non-linear conducting device." The applicant also had disclosed other gaseous tubes for use as the specified keying device.

The amendment to the claim had been submitted more than one year after vacuum tube diode keying had been demonstrated at a trade show held by the National Association of Music Manufacturers. The defendants, pointing to the public use of the invention, argued invalidity under the late-claiming doctrine. The court was faced with an interesting dilemma. If the generic term, "non-linear conducting device," were broadly construed under the doctrine of equivalents, the defendants' device would infringe the plaintiff's claim because the defendants keyed with a vacuum tube diode, which would then be within the plaintiff's generic term. But to so interpret the term, the court would have to invalidate the claim because of amendment after the one-year public use period, since the applicant had not disclosed the vacuum tube diode species in the original application and claims.

The district court had granted summary judgment for the defendants, holding the plaintiff's claim invalid.⁹¹ There was an extensive stipulation of uncontested facts and extended hearings at which a substantial amount of evidence was presented. The court made 219 findings of fact. In spite of all this, the wisdom of the district court's summary judgment of patent invalidity is questionable. While summary judgment may be granted in patent infringement cases,⁹² it is not ordinarily appropriate⁹³ and should be employed only when there is no genuine issue of any material fact. Nevertheless, the Seventh Circuit affirmed the summary judgment of patent invalidity.

In the *Faulkner* case, the only form of electronic keying, or "non-linear conducting device," disclosed in the original application was neon glow tube keyers.⁹⁴ A prior patent disclosed vacuum tube diode keying and was, in fact, cited against the *Faulkner* application by the Patent Office Examiner.⁹⁵ Under the doctrine of file wrapper estop-

91. *Faulkner v. Baldwin Piano & Organ Co.*, 189 U.S.P.Q. 695 (N.D. Ill. 1976).

92. *Smith v. General Foundry Mach. Co.*, 174 F.2d 147, 151 (4th Cir.), *cert. denied*, 338 U.S. 869 (1949).

93. *Long v. Arkansas Foundry Co.*, 247 F.2d 366, 368 (8th Cir. 1957).

94. 561 F.2d at 680.

95. 189 U.S.P.Q. at 703.

pel,⁹⁶ Faulkner's claim should not have been interpreted to include that species of his generic term and the public use of the device should not, at least upon a motion for summary judgment, have been held to invalidate the claims under the late-claiming doctrine. There was a genuine issue of the scope with which Faulkner's claim should be interpreted and summary judgment was inappropriate.⁹⁷

Plaintiff Faulkner was a highly experienced electronics engineer who had had some patent prosecution experience. He had elected to prepare and prosecute this particular application himself and he probably lived to regret this. Had he not expanded the claim from "neon glow tube attenuator" to "non-linear conducting device," he would still have a valid patent, albeit not a patent infringed by defendants' devices. By expanding the claim, he encompassed a device which had been publicly exhibited and played more than a year earlier. He thereby made a mistake an experienced patent attorney would not have made if the public exhibition had been known to the attorney.

The *Faulkner* case illustrates the extent to which courts have expanded theories designed to curtail the scope of the patent monopoly grant. *Muncie Gear* itself interprets the term "date of application" in section 103 as including dates of subsequent amendments of the application. *Faulkner* goes one step further and combines the late-claiming doctrine of *Muncie Gear* with what is, in effect, the doctrine of equivalents⁹⁸ in order to invalidate a claim which probably did not contemplate the element in public use more than a year earlier. We are thereby again reminded that there are diverse legal theories available to invalidate issued patents.

CONCLUSION

The number of patent cases before the United States Court of Appeals for the Seventh Circuit during the past few years is not necessarily indicative of any deliberate avoidance by the patent bar. On the other hand, it cannot be said that infringement cases are being brought in this circuit in great numbers if the quantity of appellate cases is representative of lower court activity.

The *Panther Pumps* and *Roberts* cases should encourage those enforcing patent grants, but the special facts of these cases, civil contempt

96. See text accompanying notes 20-22 *supra*.

97. See *Technitrol, Inc. v. Control Data Corp.*, 550 F.2d 992 (4th Cir.), *cert. denied*, 434 U.S. 822 (1977), which involved a magnetic data storage system. The court held that summary judgment was not available where a patent claim is susceptible of two constructions.

98. See *Graver Tank & Mfg. Co. v. Linde Air Prod. Co.*, 339 U.S. 605, 608 (1949).

and confidential relationship—the defendants committing fraud in each instance—allowed the court to rely on ancillary issues in upholding patent validity. Without the special fact situations, the court might have treated the patentability questions much more harshly.

The other four cases, *Faulkner*, *St. Regis Paper*, *Milprint* and *The Allen Group*, are typical of the attitude with which many courts view the issued patent. Except for *Milprint*, the Seventh Circuit court seemed to have little difficulty in finding that the patents were without sufficient inventiveness to qualify for patentability. In *St. Regis Paper* and *The Allen Group*, the inventions would have been quite obvious to one skilled in the art, had that mythical person had all of the cited sources before him.

Faulkner seems to be the result of a mistake in judgment, more than anything else. The patentee unfortunately not only prosecuted his own patent, but brought an infringement suit in which he probably overreached. By arguing that the defendant's device was covered by his claims, he thereby allowed the court to invalidate the patent for late-claiming.

In *Milprint*, the court was able to side-step the validity issue by deferring to the state court, which had taken jurisdiction initially. While the decision was probably correct procedurally, one wonders how receptive state courts are to complicated patentability fact situations.

It is hoped that in future years the Court of Appeals for the Seventh Circuit will hear a greater proportion of the patent cases reaching the courts of appeals. Then, perhaps, the Seventh Circuit will regain its pro-patent reputation and again take its place as a major contributor to the development of patent law.

